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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,291	09/25/2003	George Liang	2003P14216US	4268

7590 08/30/2005

Siemens Corporation  
Intellectual Property Department  
170 Wood Avenue South  
Iselin, NJ 08830

EXAMINER

PATEL, VISHAL A

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/671,291

Applicant(s)

LIANG, GEORGE

Examiner

Vishal Patel

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Anderson et al (US. 6,261,053).

Regarding claim 1: Anderson discloses an outer air seal assembly (seal assembly of figure 13) for reducing leakage proximate a fluid guide component having a predetermined direction of rotation (rotation of turbine component inside 20 and 20', intended use). The seal assembly comprising a first boundary member (20) radially spaced apart from a central axis by a predetermined first distance (distance from axis where gas is flowing), the first boundary member characterized by a first interface edge and an opposite second interface edge (first edge near gap 58 and opposite second interface edge opposite of the first edge, similar to the first edge having 30 as showed in figure 8 and an opposite second edge having 30, a second boundary member (20') radially spaced apart from the central axis by a predetermined second distance and the second boundary member being characterized by a first interface edge and an opposite second interface edge (first edge having 30 as showed in figure 8 and an opposite second edge having 30, these same edges exit for figure 13).

The second boundary member first edge being characterized by a radially aligned portion (outer portions that are aligned toward each other) and a radially-skewed portion extending rotationally downstream therefrom (the radially-skewed portion at the radially inner region). The second boundary member first edge being disposed proximate and substantially parallel to the first boundary member second edge and space apart therefrom by an interface gap (gap 58) disposed therebetween.

The interface gap includes a radially-aligned portion (the interface gap has a radially-aligned portion that is aligned with the radially-aligned portion of the first edge of the second boundary member that is adjacent to the radially outward edge) and a radially-skewed portion (radially-skewed portion of the interface gap that is adjacent to the radially inward region and aligned with the radially-skewed portion of the first edge of the second boundary member), the radially-skewed portion being rotationally-downstream from the radially-aligned portion of second boundary member first edge and having a radially-inward region (radially-inward region of 20' that forms a part of the interface gap) and a radially-outward region (radially-outward region of 20' opposite of the radially-inward region), the radially-outward region being rotationally-upstream of the radially inward region (the radially-outward region is upstream from the radially-inward region).

Regarding claim 2: The interface gap (58) separates the first and second boundary members circumferentially.

Regarding claim 3: The seal assembly further including a blocking panel disposed within the interface gap (panel similar to 16 blocking the interface gap 58).

Regarding claim 4: The seal assembly further comprising a radially-aligned region disposed outwardly of the radially skewed portion (portions above and below immediate the blocking panel).

Regarding claim 5: The blocking panel disposed within the interface gap.

Regarding claim 6: The blocking panel is disposed within the radially-aligned region (the panel is between the radially-aligned region of the first and second boundary members).

Regarding claim 7: A partition member (as showed in attached figure 13) extending into the interface gap, wherein a serpentine-shaped pathway is formed within the interference gap (this is the case since two partition members are there and it forms a serpentine shape pathway).

Regarding claim 8: The partition member is disposed on the first boundary member (see attach figure).

Regarding claim 9: The partition member is disposed on the second boundary member (see attached figure).

Regarding claim 10: The partition member is oriented in a substantially radially aligned manner with respect to the central axis).

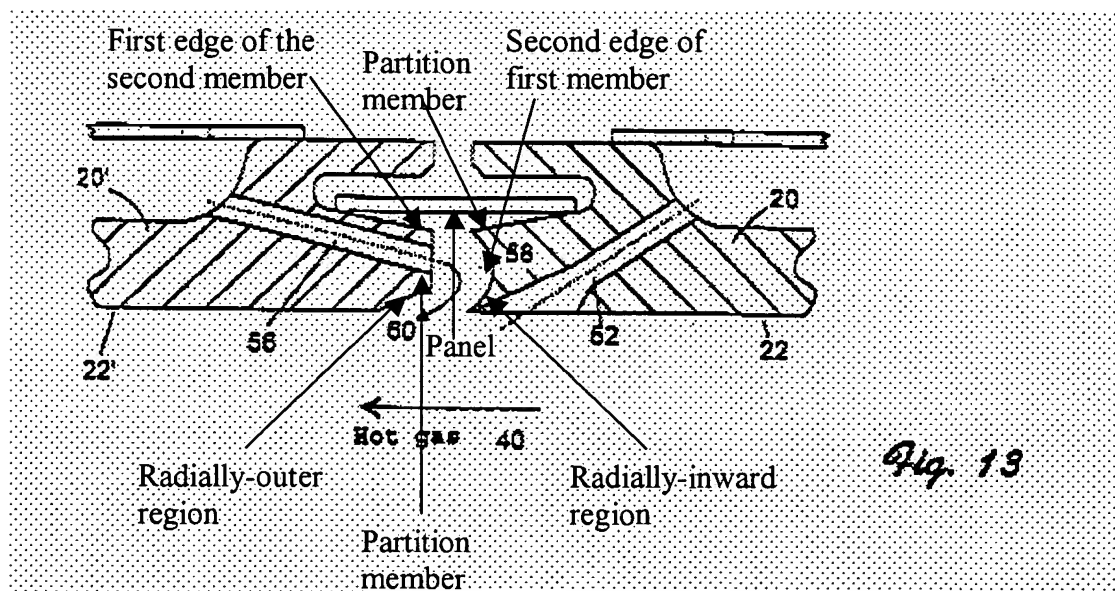
Regarding claim 11: The partition member is oriented in a circumferentially aligned manner with respect with the central axis (this is the case since the partition are circumferential).

Regarding claims 12-13: The first boundary member further includes a radially inward surface (inward surface that has the partition) and a conduit (52) adapted to fluidly connect a source of cooling fluid to the interface gap, whereby the interface gap is adapted to deliver the cooling fluid to the location proximate the radially inward surface (as seen in the attached figure). The conduit is fluidly connected to the radially skewed portion.

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Regarding claims 14-15: The second boundary member further includes a radially inward surface (inward surface that has the partition) and a conduit (56) adapted to fluidly connect a source of cooling fluid to the interface gap, whereby the interface gap is adapted to deliver the cooling fluid to the location proximate the radially inward surface (as seen in the attached figure). The conduit is fluidly connected to the radially-skewed portion.

Regarding claims 16-20: The first and second boundary members have a radially inward surface (surfaces having the radially-inward region and the radially-outward region). The interface gap separates the first and second boundary members axially (as seen in attached figure). The seal assembly further including a radially aligned region (regions adjacent to the partitions) disposed radially-outward of the radially skewed portion.



### ***Conclusion***

### ***Response to Arguments***

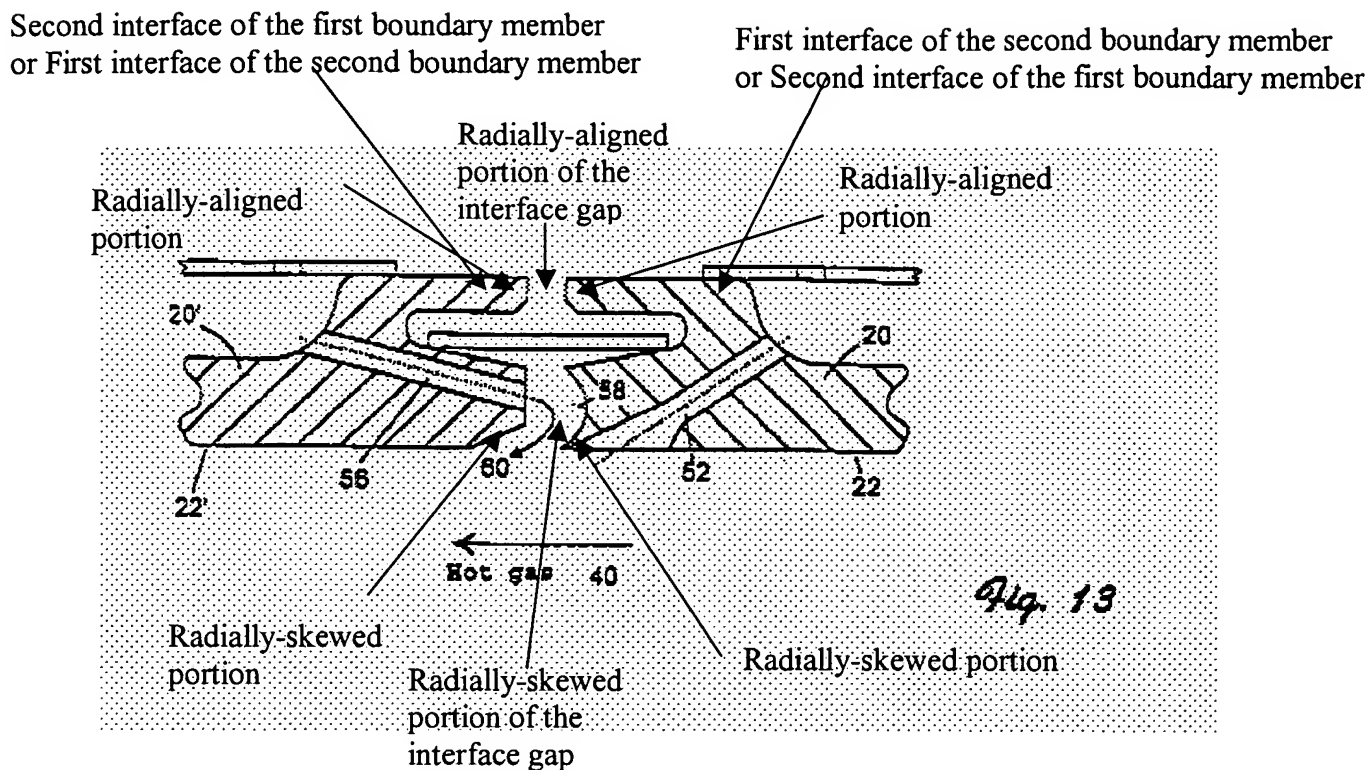
3. Applicant's arguments filed 6/27/05 have been fully considered but they are not persuasive.

Applicants' argument that Anderson does not teach the second boundary member first edge to have a radially-aligned portion and a radially-skewed portion extending rotationally-downstream thereof is not persuasive because as noted above the reference does show this limitation (The second boundary member first edge being characterized by a radially aligned portion (outer portions that are aligned toward each other) and a radially-skewed portion extending rotationally downstream therefrom (the radially-skewed portion at the radially inner region). The second boundary member first edge being disposed proximate and substantially parallel to the first boundary member second edge and space apart therefrom by an interface gap (gap 58) disposed therebetween).

Applicants' arguments that Anderson does not teach the interface gap to have a radially-aligned portion that is aligned with the radially-aligned portion of the first edge of the second boundary member is not persuasive because the interface gap having the radially aligned-portion is radially aligned at the outer region (see attached figure below).

Applicants' argument that Anderson does not teach the interface gap to have a radially-skewed portion that is aligned with the radially-skewed portion of the first edge of the second boundary member is not persuasive because the interface has the skewed portion that is aligned at the inner region (see attached figure below).

Applicants' argument that Anderson does not teach that the radially outward region being rotationally upstream of the radially region is not persuasive because as seen in the attached figure the radially-inward region is close to the stream of gas and the radially-outward region is further away from the stream of gas (see attached figure above).



### Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



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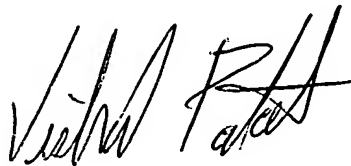
however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 571-272-7060. The examiner can normally be reached on 6:30am to 8:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP  
August 18, 2005

A handwritten signature in black ink, appearing to read 'Vishal Patel', with a stylized flourish at the end.

Vishal Patel  
Patent Examiner  
Tech. Center 3600